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Steven D. Seip

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EXAMINER

CHEUNG, WILLIAM K

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte STEVEN D. SEIP, EDWIN B. TOWNSEND IV,
SEHYUN KIM, and LESLIE A. BOCKMAN

Appeal 2009-003318
Application 10/673,791
Technology Center 1700

Decided:¹ June 22, 2009

Before EDWARD C. KIMLIN, TERRY J. OWENS, and
PETER F. KRATZ, *Administrative Patent Judges*.

KIMLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-6 and 12-24.

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the Decided Date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

We have jurisdiction under 35 U.S.C. § 6(b).

Claims 1 and 12 are illustrative:

1. A household article exhibiting enhanced resistance to staining, said household article comprising:

a nucleated propylene/ethylene impact copolymer having an ethylene content of up to about 15 percent by weight, and a xylene solubles fraction having an intrinsic viscosity of at least 3 dL/g;

wherein said xylene soluble fraction has a molecular weight (Mw/1000) of at least about 350;

said propylene/ethylene copolymer containing an additive package consisting essentially of: a phenolic antioxidant, a phosphite, and an acid scavenger;

said household article being essentially free of sodium containing additives.

12. A household article exhibiting enhanced stain resistance, said household article comprising:

a propylene homopolymer having a crystallinity of at least about 55 percent,

said propylene polymer containing an additive package consisting essentially of: a phenolic antioxidant, a phosphate, and an acid scavenger;

said household article being essentially free of sodium containing additives.

The Examiner relies upon the following references in the rejection of the appealed claims (Ans. 2):

Betso

5,925,703

Jul. 20, 1999

General Electric (GE) Specialty Chemicals, Application Profile of Ultrinox 651 Phosphite Antioxidant (1995) (hereafter GE).

Appellants' claimed invention is directed to a household article comprising a composition comprising either a nucleated propylene/ethylene impact copolymer having an ethylene content of up to about 15 percent by weight, or a propylene homopolymer having a crystallinity of at least about 55 percent. The household article exhibits stain resistance.

Appealed claims 4, 5, 14, 15, 19, 20, 23, and 24 stand rejected under 35 U.S.C. 112, second paragraph. Claims 1-6 and 12-24 stand rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being unpatentable over Betso. Claims 5, 15, 19 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Betso in view of GE.

We have thoroughly reviewed the respective positions advanced by Appellants and the Examiner. In so doing, we find ourselves in agreement with Appellants that the Examiner's rejections are not sustainable.

We consider first the Examiner's rejection under § 112, second paragraph. According to the Examiner, the recited term "thiosynergist" is indefinite because it is not defined in Appellants' Specification and "because the recited term broadly embraces synergies that are not in the area of polymer stabilization from aging as well" (Ans. sentence bridging 3-4). The Examiner states that "[w]ithout stating the type or [sic, of] area of improvement from the synergy, one of ordinary skill in the art would not know the metes and bounds of the claims or be able to appreciate the values of the claimed invention" (Ans. 4, first para.).

We agree with Appellants that the Examiner “improperly equates breadth with indefiniteness” (Reply Br. 2, third para.). It is well settled that claim language is not to be read in a vacuum but in light of the Specification and the state of the art as it would be interpreted by one of ordinary skill in the art. *In re Snead*, 710 F.2d 1544, 1548 (Fed. Cir. 1983). In the present case, Appellants have submitted ample evidence that one of ordinary skill in the art is well aware that a thiosynergist is a sulfur-containing compound used in polypropylene compositions as a secondary antioxidant in conjunction with primary stabilizers. It is of no moment that such a compound may have other uses in such compositions. The Examiner has not demonstrated, based on the state of the art cited by Appellants, that one of ordinary skill in the art would be unable to reasonably understand what is meant by a thiosynergist and consequently the scope of the rejected claims requiring this additive as part of the claimed copolymer or polymer compositions, including articles comprising such a composition. Also, to the extent that a thiosynergist-containing composition may additionally embrace synergies that are not in the area of polymer stabilization, as submitted by the Examiner, the Examiner has not demonstrated that one of ordinary skill in the art would not reasonably understand the scope of the rejected claims.

We now turn to the Examiner’s rejection of all the appealed claims under § 102 / § 103. As explained by the Examiner, Betso discloses filled polymer compositions that can be molded into household articles that may contain polypropylene impact copolymers in polyolefin compositions (TPOs), as well as random copolymers of ethylene/propylene wherein the ethylene content is 1.5-7 percent. The thermoplastic polymer containing the polypropylene impact copolymers and random copolymers may be

polypropylene. The Examiner acknowledges that Betso does not teach that the propylene/ethylene impact copolymer is nucleated, and has a xylene solubles fraction having the claimed viscosity and molecular weight. Nor does Betso describe or suggest a propylene homopolymer having a crystallinity of at least about 55 percent, as presently claimed.

It is the Examiner's position that "[s]ince the ethylene content of the copolymer of Betso et al. is below 15 percent, the composition of Betso et al. and the composition of the claimed household article are substantially identical" (Ans. 5, second para.) and, therefore, the ethylene/propylene copolymer of Betso inherently has a xylene solubles fraction having the claimed intrinsic viscosity and molecular weight. It is the Examiner's position that the copolymer of Betso inherently has the claimed properties because it "is substantially identically to the composition as claimed" (Ans. 11, second para.).

When a claimed product reasonably appears to be substantially the same as a product disclosed by the prior art, the burden is on the applicant to prove that the prior art product does not necessarily or inherently possess characteristics attributed to the claimed product. However, the initial burden is on the Examiner to demonstrate with facts and compelling reasoning that the claimed and prior art products are substantially the same. In the present case, the Examiner has not met this burden. Simply because Betso discloses an ethylene/propylene copolymer wherein the ethylene content is less than about 15 percent by weight does not mean that Betso discloses, or even renders obvious, the presently claimed nucleated propylene/ethylene impact copolymer having a xylene solubles fraction with the recited intrinsic viscosity and molecular weight. As pointed out by Appellants, the portion

of the reference cited by the Examiner for the 1.5-7 percent ethylene content refers to random copolymers, not the polypropylene impact copolymers mentioned in the previous sentence (*see* col. 9, ll. 15-20). Also, the Examiner has not refuted Appellants' reasonable statement that "[p]arameters such as catalyst, co-catalyst, electron donor, temperature, residence time and hydrogen pressure are routinely varied to produce impact copolymers having different properties" (Reply Br. 6, second para.). Hence, the Examiner has not shouldered the burden of establishing on this record sufficient correspondence between nucleated propylene/ethylene impact copolymers within the scope of independent claims 1 and 17 and the ethylene/propylene impact copolymers generally disclosed by Betso, as well as the random copolymers disclosed by Betso, to reasonably conclude that they have substantially the same properties. Without such correspondence, the Examiner's finding of inherency is without factual basis.

The same analysis applies to the claimed propylene homopolymer having a crystallinity of at least about 55 percent. We agree with Appellants that the "Examiner has not provided a reasonable basis in fact or technical reasoning" (App. Br. 14, fourth para.) to support the determination that Betso inherently discloses the recited property (crystallinity). The Examiner has set forth no reason why the polypropylene impact polymers disclosed generally by Betso inherently possesses the recited crystallinity, nor has the Examiner set forth the requisite rationale for why it would have been obvious for one of ordinary skill in the art to select a propylene homopolymer having the claimed crystallinity in the polymer composition of Betso. As stated by Appellants, "the Examiner does not appear to have presented any specific arguments in the Answer" (Reply Br. 10, second

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para.). The Examiner's discussion that the claimed term "nucleated" implies either "semi-crystalline" or "crystalline" material does not address the crystallinity of the claimed propylene homopolymer (Ans. 7, last para.).

The Examiner's citation of GE in the § 103 rejection of claims 5, 15, 19 and 24 does not remedy the deficiencies of Betso discussed above.

In conclusion, based on the foregoing, we are constrained to reverse the Examiner's rejections.

REVERSED

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